

-26-

## CLAIMS

We claim:

- 5 ✓ 1. A retroreflective structure comprising an array of transparent prisms having a base and three facets extending therefrom to a common apex, the base of the prisms lying in a common plane, the prisms being spaced between 0.0005 inch <sup>and</sup> 0.003 inches on center with a reflective coating adhered to the facets.
- 10 2. A retroreflective structure comprising an array of transparent faceted cube corner prisms having a base and three facets extending therefrom to a common apex, the base of the prisms lying in a common plane, the prisms being spaced 0.002 inches on center with a reflective coating adhered to the facets.
- 15 <sup>2</sup> 3. The structure of claim 1, wherein a flat surface is provided between the base of prisms to reflect light.
- <sup>3</sup> 4. The structure of claim 1, which includes several arrays seamed together.
- 20 <sup>4</sup> 5. The structure of claim 1, wherein the prisms are cube-corner prisms.
- <sup>5</sup> 6. The structure of claim 1, wherein adjacent prisms form prism pairs in which the tips of the apices of the prism pairs are tilted with respect to one another.
- 25 <sup>6</sup> 7. The structure of claim 1, wherein the prisms are orientation free.

27

7

8.

The structure of claim 1, wherein the light retroreflected from the structures encompasses a 0.5 degree angle of observation, uniform orientation-free cone.

5 9. A method of forming retroreflective sheeting comprising the steps of:

- 10 a) forming a mold by forming three parallel sets of grooves in a body of mold material; the grooves intersecting at an angle to form a plurality of prism pairs, each prism in a pair having a base and three intersecting lateral faces which meet at an apex, and wherein the grooves between prism pairs are spaced between 0.0005 inch to 0.003 inches apart.
- 15 b) forming said sheeting in said mold;
- c) removing the sheeting from the mold; and
- 20 d) before or after removing, coating the lateral faces with a light reflective material to form said sheeting for reflecting a uniform orientation free cone of light which encompasses a 0.5 degree angle of observation.

10. Retroreflective sheeting formed by the method of claim 9.

25 11. A method of forming retroreflective sheeting comprising the steps of:

- 30 a) providing a mold comprised of a plurality of prism pairs, spaced between 0.0005 inch and 0.003 inches on center, each prism having a base and three intersecting lateral faces which meet at an apex;

-28-

- b) forming said sheeting in said mold;
- c) removing said sheeting from said mold; and
- d) before or after removing the sheeting coating the faces with reflective material.

- ✓
- 5 12. The method of claim 10<sup>11?</sup>, wherein the prisms are made by forming three parallel sets of grooves spaced between 0.0005 inch to 0.003 inches apart in a body of mold material; the grooves intersecting at a dihedral angle, which dihedral angle may not be constant, and
- 10 wherein the sheeting so formed will retroreflect a uniform orientation free cone of light encompassing a 0.5 degree angle of observation.
13. Retroreflective sheeting formed by the method of Claim 11.
- 15 14. A method of forming retroreflective sheeting comprising the steps of:
- a) forming a mold by forming three parallel sets of grooves in a body of mold material, the grooves spaced between 0.0005 inch to 0.003 inches apart;
  - 20 the grooves intersecting at an angle to form a plurality of prism pairs, each prism in a pair having a base and three intersecting lateral faces which meet at an apex;
  - b) forming said sheeting in said mold;
  - 25 c) removing the sheeting from the mold; and
  - d) before or after removal, coating the faces with metallic retroreflective material.

"6TAT" 5880885 100197

Add  
A1Sub  
CS